

Addendum #1:

Performance Measures



Transportation Improvement Program 2017-2021

Original (PM1) – 7/26/18
Updated (TAM) – 9/20/18
Updated (2019 PM1 targets) – 3/15/19
Updated (PM2 and PM3) – 6/26/19

About the Transportation Improvement Program

The Transportation Improvement Program (TIP) is a four-year work program that lists all regionally significant and federally funded transportation projects and service enhancements scheduled across the Kingsport MTPO planning area. The program includes projects for all modes of surface transportation including highways and streets, public transportation, and walking and bicycling. Any project included in the TIP must be consistent with, or be selected from an approved Long Range Transportation Plan (LRTP). Additionally, the TIP must be fiscally constrained by anticipated revenues, or identify funding mechanisms currently in place to pay for the proposed work. The FYs 2017-2021 TIP was adopted by the Kingsport MTPO Executive Board on November 3, 2016.

- For access to a PDF version of the TIP document, visit:
<https://www.kingsporttn.gov/city-services/kmtpo/plans-and-documents/tip/>
- Any feedback or questions can be sent to: MTPO@KingsportTN.gov

Purpose of the Addendum

In 2012, Congress passed and the President signed into law Moving Ahead for Progress in the 21st Century (MAP-21), which established performance-based planning and performance management requirements for States and MPOs.

The current Fixing America's Surface Transportation Act (FAST Act) continues MAP-21's overall performance approach, and ensures that State DOT's and MPO's invest in projects that collectively make progress toward the seven National Goals, listed below, established by Congress (these goals are also listed in the TIP on page 12 and also in the LRTP in Section 2.1).

1. **Safety** - To achieve a significant reduction in traffic fatalities and serious injuries on all public roads.
2. **Infrastructure Condition** - To maintain the highway infrastructure asset system in a state of good repair.
3. **Congestion Reduction** - To achieve a significant reduction in congestion on the National Highway System (NHS).
4. **System Reliability** - To improve the efficiency of the surface transportation system.
5. **Freight Movement and Economic Vitality** - To improve the national freight network, strengthen the ability of rural communities to access national and international trade markets, and support regional economic development.
6. **Environmental Sustainability** - To enhance the performance of the transportation system while protecting and enhancing the natural environment.
7. **Reduced Project Delivery Delays** - To reduce project costs, promote jobs and the economy, and expedite the movement of people and goods by accelerating project completion through eliminating delays in the project development and delivery process, including reducing regulatory burdens and improving agencies' work practices.

The Kingsport MTPO will be required to establish performance targets, and track progress towards target achievement, for a number of measures related to safety, pavement and bridge condition, travel time reliability, and traffic congestion. These requirements are outlined through a series of rules published in the Federal Register (23 CFR Part 490).

This addendum fulfills the MTPO's requirement to include a description in the TIP of the anticipated effect of the TIP toward achieving targets related to these performance measures as listed throughout this document.

Safety Performance Measures (PM1)

The final rule on safety performance measures target setting was the first of a series of rules related to target setting, effective April 14, 2016. Safety performance measures regulations in support of the Highway Safety Improvement Program (HSIP) require State DOTs and MPOs assess the following on all public roads covered by HSIP:

- Number of Fatalities
- Fatality Rate (per 100 Million VMT)
- Number of Serious Injuries
- Serious Injury Rate (per 100 Million VMT)
- Number of Non-motorized Fatalities and Serious Injuries

MPOs may establish HSIP targets by either (1) agreeing to plan and program projects so they contribute toward the accomplishment of the state HSIP target or (2) committing to a quantifiable HSIP target for the metropolitan planning area.

On February 7, 2019, the Executive Board of the Kingsport MTPO voted to support the Tennessee Department of Transportation's and Virginia Department of Transportation's safety performance measure targets by planning and programming projects so they contribute to the accomplishment of these targets, thereby fulfilling the aforementioned requirements related to safety performance measure target setting established under MAP-21 and the FAST Act. These targets, along with baseline information, can be found in Figure 1.

By agreeing to plan and program projects so they contribute toward the accomplishment of the state HSIP target, the Kingsport MTPO agrees to:

- Work with the State and safety stakeholders to address areas of concern for fatalities or serious injuries within the metropolitan planning area
- Coordinate with the State and include the safety performance measures and the State's HSIP targets for those measures in the long range transportation plan (LRTP)
- Integrate into the metropolitan transportation planning process, the safety goals, objectives, performance measures and targets described in other State safety transportation plans and processes such as applicable portions of the HSIP, including the SHSP
- Include a description in the TIP (Transportation Improvement Program) of the anticipated effect of the TIP toward achieving HSIP targets in the LRTP, linking investment priorities in the TIP to those safety targets

Safety Performance Measures Targets (2015-2019)

Figure 1 (Tennessee) and Figure 2 (Virginia) show targets established by the states and supported through resolution by the Executive Board of the Kingsport MTPO. The Safety Performance Management Final Rule defines the aforementioned measures as the five-year rolling averages for:

- **Number of Fatalities:** The total number of persons suffering fatal injuries in a motor vehicle crash during a calendar year.
- **Rate of Fatalities:** The ratio of total number of fatalities to the number of vehicle miles traveled (VMT, in 100 Million VMT) in a calendar year.
- **Number of Serious Injuries:** The total number of persons suffering at least one serious injury in a motor vehicle crash during a calendar year.

- **Rate of Serious Injuries:** The ratio of total number of serious injuries to the number of VMT (in 100 Million VMT) in a calendar year.
- **Number of Non-motorized Fatalities and Non-motorized Serious Injuries:** The combined total number of non-motorized fatalities and non-motorized serious injuries involving a motor vehicle during a calendar year.

The five-year rolling average is calculated by adding the number of fatalities or serious injuries for the consecutive five-year period, dividing by five, and rounding to the nearest tenth decimal place.

Figure 1 State of Tennessee Established Statewide Targets

TENNESSEE/TDOT SAFETY MEASURES	BASELINE	TARGET
	2013-2017	2015-2019
Number of Fatalities	1001.2	1022.0
Fatality Rate	1.332	1.291
Number of Serious Injuries	7226.0	7374.6
Serious Injury Rate	9.622	9.324
Number of Non-motorized Fatalities and Serious Injuries	469.2	546.8

Figure 2 Commonwealth of Virginia Established MPO Targets

VIRGINIA/VDOT SAFETY MEASURES	TARGET
	2019
Number of Fatalities	1
Fatality Rate	1.07
Number of Serious Injuries	16
Serious Injury Rate	25.92
Number of Non-motorized Fatalities and Serious Injuries	1

While FHWA will determine whether a State DOT has met or made significant progress toward meeting these targets, it will not directly assess MTPO progress toward meeting HSIP targets. The MTPO will continue to review these performance measures and will be required to update these targets annually, with the next update required by February 27, 2020.

Pavement and Bridge Condition Performance Measures (PM2)

The FHWA published the Pavement and Bridge Condition Measures (PM2) Final Rules in the Federal Register on January 18, 2017, with an effective date of May 20, 2017. TDOT and VDOT established

statewide pavement and bridge condition targets by the May 20, 2018 deadline. The MTPO adopted the required 4-year targets, for both Tennessee and Virginia, at the November 1, 2018 Executive Board meeting.

TENNESSEE/TDOT PAVEMENT AND BRIDGE CONDITION (PM2) TARGETS			
Performance Measures	Baseline	2-Year Target	4-Year Target
Percentage of pavement on the Interstate System in good condition	75.6%	NA	60.0%
Percentage of pavement on the Interstate System in poor condition	0.14%	NA	1.0%
Percentage of pavement on the non-Interstate NHS in good condition	44.8%	42.0%	40.0%
Percentage of pavement on the non-Interstate NHS in poor condition	3.24%	4.0%	4.0%
Percentage of NHS bridges classified as in good condition	39.5%	36.0%	36.0%
Percentage of NHS bridges classified as in poor condition	4.9%	6.0%	6.0%

VIRGINIA/VDOT PAVEMENT AND BRIDGE CONDITION (PM2) TARGETS	
Performance Measures	4-Year Target
Percentage of pavement on the Interstate System in good condition	45%
Percentage of pavement on the Interstate System in poor condition	<3%
Percentage of pavement on the non-Interstate NHS in good condition	25%
Percentage of pavement on the non-Interstate NHS in poor condition	<5%
Percentage of NHS bridges classified as in good condition	33%
Percentage of NHS bridges classified as in poor condition	3%

System Performance Measures (PM3)

The FHWA published the System Performance Measures (PM3) Final Rules in the Federal Register on January 18, 2017, with an effective date of May 20, 2017. TDOT and VDOT established System Performance targets by the May 20, 2018 deadline. The MTPO adopted the required 4-year targets, for both Tennessee and Virginia, at the November 1, 2018 Executive Board meeting.

TENNESSEE/TDOT SYSTEM PERFORMANCE (PM3) TARGETS			
Performance Measures	Baseline	2-Year Target	4-Year Target
Interstate Reliability (percent of person-miles traveled on the Interstate System that are reliable)	87.7%	85.3%	83.0%
Non-Interstate NHS Reliability (percent of person-miles traveled on the non-Interstate NHS that are reliable)	NA	NA	87.5%
Freight Reliability (Truck Travel Time Reliability Index)	1.35	1.35	1.33
Traffic Congestion (Peak Hour Excessive Delay per Capita)	Not applicable to the Kingsport MTPO		
Traffic Congestion (Percent of Non-Single Occupancy Vehicle Travel)	Not applicable to the Kingsport MTPO		
Total Emissions Reductions	VOC = 230.025 kg/day NOx = 363.399 kg/day PM2.5 = 2.897 kg/day	VOC = 30.698 kg/day NOx = 62.840 kg/day PM2.5 = 0.120 kg/day	VOC = 61.396 kg/day NOx = 125.680 kg/day PM2.5 = 0.240 kg/day

VIRGINIA/VDOT SYSTEM PERFORMANCE (PM3) TARGETS	
Performance Measures	4-Year Target
Interstate Reliability (percent of person-miles traveled on the Interstate System that are reliable)	82%
Non-Interstate NHS Reliability (percent of person-miles traveled on the non-Interstate NHS that are reliable)	82.5%
Freight Reliability (Truck Travel Time Reliability Index)	1.56
Traffic Congestion (Peak Hour Excessive Delay per Capita)	26.7 hours/capita
Traffic Congestion (Percent of Non-Single Occupancy Vehicle Travel)	37.2%
Total Emissions Reductions for VOC	1.985 kg/day
Total Emission Reductions for NOx	4.23 kg/day

TIP Impacts

All projects utilizing federal funding in the TIP are selected from the region's Long Range Transportation Plan (LRTP), which was last updated in 2017. Future projects will be subject to a thorough performance-based analysis, utilizing a variety of quantitative measures as well as staff analysis. Project selection criteria prioritize projects that promote safety and security with additional points being given if the project contains accommodations for alternative modes. Safety and Security is a primary evaluation category for projects evaluated by the MTPO and included in both the LRTP and TIP. More information on project evaluation and selection can be found beginning on Page 11 of the TIP (in the section titled 'Project Priorities and Criteria') and in the LRTP in section 2.3 (Project Evaluation Criteria) and Appendix II. The MTPO uses the ten (10) Planning Factors and the seven (7) National Goals as guiding principles to select projects to include in the LRTP and TIP. Future updates to the LRTP and TIP will describe, in more detail, the performance measures and targets used to assess system performance, evaluate the performance of the transportation system with respect to the performance targets, and report on progress made. The TIP must link investment priorities to the targets in the LRTP and describe, to the maximum extent practicable, the anticipated effect of the program toward achieving established targets. The program of projects and investment priorities included in the TIP must support all state performance measure targets.

Progress, Monitoring, and Next Steps

A broader discussion of TIP impacts on established targets will be included in the FY 2020-2023 TIP, due in 2019.

Under current federal law, the MTPO's Long Range Transportation Plan must be updated at least once every five years. As such, the 2040 LRTP will be replaced by the 2045 LRTP during calendar year 2022.

Major revisions to the adopted LRTP and TIP will be carried out, as needed, in the form of formal amendments. Prior to adoption of an amendment, a public notice is published in accordance with the procedures contained in the MTPO's Public Participation Plan.

Proposed amendments will be posted to the MTPO's website at the following link:
<https://www.kingsporttn.gov/city-services/kmtpo/>

Transit Asset Management

The two most recent federal transportation laws, MAP-21 and FAST Act, establish performance measure requirements to ensure states and metropolitan planning organizations (MPOs) are investing transportation funds in projects that collectively will contribute towards the achievement of national goals. The USDOT recently published new rules for states and MPOs to collect data and establish performance targets that will support performance and outcome-based investment decisions.

The new federal performance measurement requirement for transit agencies focuses on one area: transit asset management (TAM). The measures look specifically at the percentage of revenue vehicles that have exceeded their Useful Life Benchmark (ULB), the percentage of non-revenue and service vehicles that have exceeded their ULB, and percentage of facilities with a condition below 3.0 on the Federal Transit Administrator's TERM Scale. All transit agencies receiving grants from the FTA are required to complete a TAM plan. The FTA has established two tiers of agencies based on size parameters.

- A Tier I agency operates rail, OR has 101 vehicles or more all fixed route modes, OR has 101 vehicles or more in one non-fixed route mode.
- A Tier II agency is a subrecipient of FTA 5311 funds, OR is an American Indian Tribe, OR has 100 or less vehicles across all fixed route modes, OR has 100 vehicles or less in one non-fixed route mode.

The first completed TAM plan must be sent to the National Transit Database (NTD) by October 1, 2018. Other required deadlines are found in the table below.

Reporting Activity	Reporting Deadline (by Fiscal Year)		
	July - June	Oct – Sept	Jan - Dec
Complete compliant TAM Plan	October 2018	October 2018	October 2018
Report FY18 asset data to NTD Submit FY19 targets to NTD	October 2018	January 2019	April 2019
Report FY19 asset data to NTD Submit FY20 targets to NTD Submit narrative report to NTD	October 2019	January 2020	April 2020
Report FY20 asset data to NTD Submit FY21 targets to NTD Submit narrative report to NTD	October 2020	January 2021	April 2021
Complete updated TAM Plan	October 2022	October 2022	October 2022

In Tennessee, the Tennessee Department of Transportation (TDOT) has opted to sponsor a group TAM plan for Tier II rural agencies. NET Trans has decided to adopt the TDOT plan and targets. Kingsport Area Transit Service (KATS) has developed their own plan and targets. These targets are shown below.

TDOT Tier II Sponsored TAM Plan Performance Measurement Targets

Rolling Stock

TDOT utilizes the FTA default ULB for revenue vehicle targets.

Vehicle Type	FTA Default Useful Life Benchmark	TDOT-Set Performance Measure Target
Automobile (AO)	8	Less than 25% of automobiles will exceed the ULB
Bus (BU)	14	Less than 25% of buses will exceed the ULB
Cutaway Bus (CU)	10	Less than 25% of cutaway busses will exceed the ULB
Minivan (MV)	8	Less than 25% of minivans will exceed the ULB
Other Rubber Tire (OR)	14	Less than 25% of other rubber tire vehicles will exceed the ULB
Van (VN)	8	Less than 25% of vans will exceed the ULB

Equipment (Non-Revenue Service Vehicles)

TDOT utilizes the FTA default ULB for non-revenue service vehicles performance targets.

Vehicle Type	FTA Default Useful Life Benchmark	TDOT-Set Performance Measure Target
Non-Revenue/Service Automobile	8	Less than 25% of automobiles will exceed the ULB
Trucks/Other Rubber Tire	14	Less than 25% of other rubber tire vehicles will exceed the ULB

Facilities

TDOT utilizes the FTA TERM scale for facility conditioning targets.

Facility Type	FTA TERM RATING	TDOT-Set Performance Measure Target
Administrative/Maintenance	3	Less than 25% of Administrative Facilities will be below a 3
Passenger/Parking	3	Less than 25% of Administrative Facilities will be below a 3

KATS Transit Asset Management Targets

Vehicles	Quantity	# Vehicles > ULB	Current % Exceed ULB	2018 Target %	2019 Target %
Fixed Route	12	0	0%	0%	0%
Demand Response	8	3	37.5%	37.5%	12.5%
Staff Vehicles	2	0	0%	0%	50%
Facilities				Targets With Rating > 3	
Transit Station				100%	100%
Storage Facility				100%	100%
Trolley Barn				100%	100%

1) KATS Transit Station	Current Rating	2018 Target	2019 Target
Substructure	4	4	5
Shell	3	3	5
Interiors	4	4	5
Elevators	n/a	n/a	5
Plumbing	3	3	5
HVAC	3	3	5
Fire Protection	4	4	5
Electrical	4	4	5
Site	4	4	5
Equipment	n/a	n/a	n/a
Fare Collection	n/a	n/a	n/a
2) Storage Facility	Current Rating	2018 Target	2019 Target
Substructure	4	4	4
Shell	3	3	3
Interiors	3	3	3
Elevators	n/a	n/a	n/a
Plumbing	n/a	n/a	n/a
HVAC	n/a	n/a	n/a
Fire Protection	n/a	n/a	n/a
Electrical	4	4	4
Site	3.5	3.5	3.5
Equipment	n/a	n/a	n/a
Fare Collection	n/a	n/a	n/a
3) Maintenance Facility (Trolley Barn)	Current Rating	2018 Target	2019 Target
Substructure	4	4	4
Shell	3	3	3
Interiors	4	4	4
Elevators	n/a	n/a	n/a
Plumbing	3.5	3.5	3.5
HVAC	3	3	3
Fire Protection	n/a	n/a	n/a
Electrical	4	4	4
Site	3.5	3.5	3.5
Equipment	n/a	n/a	n/a
Fare Collection	n/a	n/a	n/a
4) Equipment	Current Rating	2018 Target	2019 Target

*KATS does not own any equipment valued \$50,000 or more; therefore, there are no targets for this category.


Kingsport Transit Executive Signature


Date

Definitions

ULB

5

Useful Life Benchmark

Excellent

No visible defects, new or near new condition-Still under warranty

4

Good

Good, but no longer new, may have slight defects or deteriorations, but is overall functional

3

Adequate

Moderately defective or deteriorated, but has not exceed useful life

2

Marginal

Defective or deteriorated, in need of replacement, exceeded useful life

1

Poor

Critical damaged or in need of immediate repair, well past useful life

In Virginia, the Department of Rail and Public Transportation (DRPT) has opted to sponsor a group TAM plan for Tier II providers. Mountain Empire Older Citizens (MEOC) has decided to adopt the DRPT plan and targets. The performance measurements and the targets can be found in the DRPT *Group Transit Asset Management Plan* and are shown below.

Virginia Department of Rail and Public Transportation
Mountain Empire Older Citizens (MEOC) TAM Targets

Performance Targets & Measures

Asset Category - Performance Measure	Asset Class	2018 Target	2019 Target
Revenue Vehicles			
Age - % of revenue vehicles within a particular asset class that have met or exceeded their Useful Life Benchmark (ULB)	AB - Articulated Bus	20%	15%
	BU - Bus	10%	10%
	CU - Cutaway	10%	10%
	MB - Minibus	25%	20%
	BR - Over-the-Road Bus	20%	15%
	TB - Trolley Bus	10%	10%
	VN - Van	25%	25%
Equipment			
Age - % of vehicles that have met or exceeded their Useful Life Benchmark (ULB)	Non Revenue/Service Automobile	25%	25%
	Trucks and other Rubber Tire Vehicles	25%	25%
Facilities			
Condition - % of facilities with a condition rating below 3.0 on the FTA TERM Scale	Administrative and Maintenance Facility	10%	10%
	Administrative Office	10%	10%
	Maintenance Facility	10%	10%
	Passenger Facilities	10%	10%

The Kingsport MTPO's planning process will integrate, either directly or by reference, the goals, objectives, performance measures, and targets described in the applicable TAM plan. Any Transportation Improvement Program (TIP) document or Metropolitan Transportation Plan (MTP) adopted after October 1, 2018 will be in compliance with the TAM Plans developed/adopted by the transit agencies within the MPO area.